WASTE MANAGEMENT

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March 14, 2008

NC Department of Environment and Natural Resources
Division of Waste Management – Solid Waste Section
1646 Mail Service Center
Raleigh, North Carolina 27699-1646
Attn: Mr. Mark Poindexter

Re: Alternate Source Demonstration
Piedmont Landfill and Recycling Center, Kernersville, North Carolina
Permit Number 34-06

Dear Mr. Poindexter:

Please find enclosed one (1) original copy of an Alternate Source Demonstration (ASD) for the above referenced facility. This document has been developed in response to a confirmed statistically significant increase (SSI) observed in MW-02 for vinyl chloride during the Second Semiannual Detection and Assessment Groundwater Monitoring Event for 2007. The ASD was developed in accordance with Section .1633(c)(3) and supports landfill gas as being the source of the contamination observed.

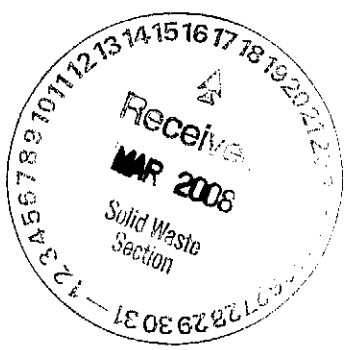
The ASD also documents a presumptive remedy (permanent modification of the site's landfill gas extraction system) which has already been successful in reducing the VOC detections in MW-02 to below the applicable Solid Waste Section Limit, as demonstrated by the analytical results contained in the report. Accordingly, it is recommended that MW-02 remain in detection monitoring and that no further action be required.

If you have any questions regarding the contents of this report or require additional information, please contact me at (770) 805-3529.

Sincerely,

Waste Management of Carolinas, Inc.

Mark R. Snyder, P.E.
Project Manager, Closed Sites



enclosure

cc: March Smith, WMCI (w/o enclosure)
Van Burbach, Ph.D., P.G. – JEI

Prepared For:

Piedmont Landfill & Recycling Center
9900 Freeman Road
Kernersville, North Carolina 27284
Permit No. 34-06

WASTE MANAGEMENT

Alternate Source Demonstration
Piedmont Landfill & Recycling Center

March 2008

Prepared By:

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Alternate Source Demonstration
Piedmont Landfill & Recycling Center

February 2008

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JEI Project No. 392.00.79

NORTH CAROLINA LICENSED SEAL 1349 GEOLOGIST G. VAN NESS BURBACH

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Michelle M. Brown

Alternate Source Demonstration
Piedmont Landfill and Recycling Center
Permit 34-06

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Alternate Source Demonstration
Piedmont Landfill and Recycling Center
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1.0 INTRODUCTION

This Alternate Source Demonstration (ASD) is being submitted to address volatile organic compound (VOC) detections, specifically vinyl chloride detected above the Solid Waste Section Limit (SWSL) and North Carolina 15A-NCAC-2L (NC-2L) groundwater standard in the second semiannual sampling event of 2007 at the Piedmont Landfill and Recycling Center (PLRC), located in Forsyth County, North Carolina (*Figure 1*). The purpose of this report is to demonstrate that the source of the VOC detections in groundwater from monitoring well MW-02 in the September 2007 sampling event is not due to a release from the landfill unit and that continued detection monitoring for MW-02 is warranted. This report was prepared in accordance with NCAC T15A.13B.1633.c.3, as it applies to an alternate source demonstration.

2.0 SITE DESCRIPTION AND BACKGROUND

2.1 General Site Description

The PLRC is a closed municipal solid waste (MSW) landfill located on approximately 108 acres in Forsyth County, North Carolina, approximately 10 miles north of the city of Kernersville. The facility is permitted under North Carolina Solid Waste Permit Number 34-06. Waste Management of Carolinas, Inc. owns the facility, which opened in June 1990. Closure construction was completed October 29, 2004, and the closure was certified by the North Carolina Department of Environment and Natural Resources (NCDENR) on December 28, 2004. The location of the site is shown in *Figure 1* and a site plan showing the layout of the site is presented in *Drawing 1*.

A composite liner system on the landfill base consisting of 18 inches compacted cohesive soil with a maximum hydraulic conductivity of $1x10^{-7}$ cm/sec overlain by a 60 mil high-density polyethylene (HDPE) geomembrane exists in Phase I, Modules 1 and 2. A double synthetic with primary and secondary leachate collection systems is incorporated in Phase I, Modules 3, 5 and 6 and Phase II, Modules 1 and 2. All other liner systems in Phase I, II and III meet the requirements of the Solid Waste Management Regulations.

The facility also has had an active landfill gas (LFG) collection and control system in operation since 1996. The LFG system consists of 55 gas extraction wells, an extraction blower system, and flares. The locations of the gas extraction wells and other LFG system components are shown on *Drawing 2*.

2.2 Site Geology and Hydrogeology

The PLRC is located in the Piedmont physiographic province of North Carolina and is underlain by intrusive granitic rocks of Pennsylvanian to Permian age which are part of the Charlotte Belt Geologic Unit. Granitic bedrock is overlain by approximately 10-40 feet of saprolitic soil and regolith consisting of gray to brown sandy silt to silty sand, which grades downward to weathered bedrock.

The uppermost aquifer is unconfined and includes both the saprolite and uppermost fractured bedrock, which are strongly connected. The groundwater level measurements taken during the September 2007 sampling event were used to construct the groundwater surface contour map attached to this report as *Drawing 1*. Groundwater flow at the site is generally west to northwest, which is consistent with surface topography.

The potentiometric contours and the groundwater flow directions presented in *Drawing 1* were used to calculate hydraulic gradients for the site. The hydraulic gradients (**i**) ranged from 0.022 ft/ft to 0.025 ft/ft. These gradients are generally consistent with past interpretations for the site. An effective porosity value (**n**) of 41 percent was used in the equation based on an average of six laboratory-derived porosities as reported in the April 1994 *Design Hydrogeologic Study*, prepared by RUST Environment & Infrastructure. Hydraulic conductivities (**K**) were also taken from the *Design Hydrogeologic Study*, and were based on slug test data from piezometers originally located nearest the respective groundwater flow paths. Using these data, the average linear flow velocity (**V**) across the site was estimated using the following modified Darcy equation: $\mathbf{V = i\,K/n}$. The groundwater flow rates for September 2007 were on average approximately 12.8 feet/year.

2.3 Groundwater Monitoring History

The landfill currently monitors groundwater under a combined Detection Monitoring and modified Assessment Monitoring Program. The site entered into an Assessment Monitoring Program for background wells MW-1 and MW-6, and down-gradient well MW-9 after volatile organic constituents were detected in MW-9 during the second semiannual event of 1996. Per receipt of approval from the North Carolina Department of Environment and Natural Resources (NC DENR), all wells at the site reverted to the Detection Monitoring Program as of the second semiannual event in 1999, as allowed by 15A NCAC 13B.1634 (b).

Due to a subsequent detection of 1,1-dichloroethane in replacement well MW-9R during the first semiannual event in 2000, the site performed Assessment Monitoring on wells MW-1, MW-6, and MW-9R through the second semiannual event of 2001. Following NC DENR approval of an August 20, 2001, request by Waste Management, background wells MW-1 and MW-6 again reverted to Detection Monitoring. Monitoring well MW-9R continues to be sampled for the NC Appendix I list of constituents plus detected Appendix II constituents during the first semiannual event and NC Appendix II list of constituents during the second semiannual event as long as statistically significant increases continue to be present. All other wells remain in detection monitoring.

2.4 September 2007 Sampling Event

Sampling for the second semiannual event of 2007 was performed on September 12-13, 2007 by Pro-Tech. During this semiannual event, all of the site compliance wells and surface water monitoring points were sampled and analyzed for the NC Appendix I list of constituents; except for MW-9R, which was sampled for the NC Appendix II list of constituents. The site leachate was also sampled during this event for the required list of parameters.

Two organic constituents were detected at quantifiable concentrations (above the SWSL) in MW-02, benzene (1.1 µg/L) and vinyl chloride (1.3 µg/L), during the September 2007 sampling event. Both of these detections also represented NC-2L exceedances. A resampling event was conducted for MW-02 on November 15, 2007, and the sample was analyzed for these two compounds. The results did not verify the benzene, which was reported at an estimated concentration of 0.98 µg/L, and which is below both the SWSL and the NC-2L standard; however, the resampling results confirmed the vinyl chloride exceedance at 1.3 µg/L, above the SWSL and the NC-2L Standard.

NC DNER was notified of the verified statistically significant increase (SSI) above background within 14 days of receipt of results, in accordance with 15A NCAC 13B.1633.c.1. The notification (transmittal letter dated December 19, 2007) indicated PLRC's intent to proceed with an ASD in accordance with 15A NCAC 13B.1634.c.3. Results from these sampling events were presented in the Second Semiannual Groundwater Report for the PLRC dated December 13, 2007. *Table 1* summarizes the detected constituents from this event, which are discussed below.

PLRC performed an initial evaluation of the data from the 2nd Semi-Annual Monitoring Event of 2007. Preliminary analysis suggested landfill gas was the source of the impacts at MW-02. This was based, in part, on the relatively low field conductivity and chloride levels in MW-02 (landfill impacts typically raise chlorides) and the fact that LFG vacuum was recently reduced in the vicinity the well, due to modifications to the gas collection system. PLRC immediately initiated actions to achieve more vacuum in the area of concern and to confirm the potential source of impacts. Following is a discussion of the field activities and the results of the source evaluation.

3.0 ASD FIELD ACTIVITIES

3.1 Adjustments to LFG Extraction System

In August 2007, the site's LFG extraction system was modified to improve overall system reliability and reduce downtime. Although this effort was successful, an inadvertent result of this modification was that the vacuum available to the wellfield, and subsequently to extraction wells in the vicinity of MW-02, was reduced. Prior to the modification, the average static pressure (vacuum) measured at the wellheads of the gas extraction wells closest to MW-02 (W-33, W-34, W-35, W-37, W-38, and W-39) was -6.7 inches of water. After the modification, and at the time of the September 2007 groundwater sampling event, the average vacuum at the same wells was approximately -1.3 inches of water. It should be noted that even though available vacuum decreased as a result of the LFG extraction system modification, at no time did

the site fail to meet the operational requirements of its NSPS / Title V permit. Additionally, the site continued to maintain compliance with all explosive gas monitoring criteria as demonstrated through quarterly gas migration monitoring.

In response to the SWRL exceedance for vinyl chloride in MW-02, measures were immediately initiated in October 2007 to address the situation. Since PLRC believed the vinyl chloride observed in MW-02 was most likely a result of landfill gas impact, the measures involved adjustments to the LFG extraction system to improve the vacuum, and therefore, the recovery of LFG in the vicinity on MW-02. During the period of October 24-26, 2007, the LFG system was adjusted by opening the valves on the wells nearest MW-02 to improve the vacuum on these wells. As a result, the average vacuum measured at W-33, W-34, W-35, W-37, W-38, and W-39 on October 26th was -6.3 inches of water, similar to that observed prior to modification of the LFG extraction system. In January 2008, additional permanent modification of the LFG header system in the vicinity of the flare was made which removed redundant elbows and fittings to eliminate resultant vacuum loss. As a result, available vacuum across the entire wellfield was further improved such that the average vacuum measured at the extraction wells near MW-02 on January 7, 2008, was -13.1 inches of water. *Table 2* summarizes the static pressures at these wells between July 2007 and January 2008.

3.2 ASD Sampling Event

On February 5, 2008, a sampling event was conducted to gather additional data for this ASD report. The sampling event was timed so that the effects of the permanent LFG extraction system modifications could be evaluated. MW-01 (the site background well), MW-02, and the site leachate were sampled in accordance with standard sampling protocols for the site. All three samples were analyzed for the indicator parameters, TOC, TDS, Ammonia; dissolved methane and anions/cations (including calcium, magnesium, sodium, potassium, chloride, alkalinity (total, bicarbonate, carbonate), and sulfate). In addition, MW-02 was analyzed for vinyl chloride and the leachate sample was analyzed for all NC leachate list VOCs. The results of the February 5th sampling event are summarized in *Table 3* and the complete laboratory report, chain of custody, and field data forms, are included at *Appendix A*. Vinyl chloride was not detected above the SWSL or the laboratory reporting limit in MW-02 during the February 5th sampling event, suggesting that the permanent modifications to the LFG extraction system were successful in reducing the LFG impact to this well.

4.0 SOURCE EVALUATION

4.1 Leachate

Leachate analytical results were reviewed to evaluate the source of impacts to groundwater. Vinyl chloride has not been detected at quantifiable concentrations in any recent leachate samples from this facility. Vinyl chloride was not detected above the method detection limit in either the September 2007 sample or the February 5, 2008 sample. Other organics, such as acetone, methyl ethyl ketone, xylenes, etc., are detected at much higher concentrations in leachate (parts per million as compared to parts per billion, and which required dilution of the sample). These organics would be found in groundwater if landfill liquids were the source. The

leachate organic data indicates that the vinyl chloride detected in MW-02 in September and December 2007 could not have come from liquid impact to the groundwater.

Further evidence of this is the level of indicators (e.g. chlorides) and other inorganics in leachate. Indicator parameters, such as chlorides, dissolved solids, and ammonia, are found at high concentrations in the leachate relative to groundwater. Leachate impacts to ground water typically include multiple inorganic exceedances above background, increasing trends of leachate indicator parameters and verified VOC and inorganic detections and/or exceedances at more than one downgradient location. Since these trends are not present at this site, it is unlikely the VOCs detected in MW-02 were due to landfill liquids. An analysis of indicator parameter data to characterize the groundwater at MW-02 indicates that the groundwater has not been impacted by landfill liquids (see Section 4.2.4 and Table 3 of this report).

4.2 Landfill Gas

VOCs detected in groundwater samples collected from wells near solid waste landfills often are falsely attributed to landfill liquids without consideration of other potential sources such as landfill gas. Typically, landfill gas is made up of approximately 55% methane, 44% carbon dioxide, and 1% other VOCs, including chlorinated hydrocarbons like vinyl chloride (Allen, et al, 1997; Deipser and Stegmann, 1994; Cowie, 2004). Numerous studies have established that VOCs present in landfill gas can readily partition into groundwater. Transfer of VOCs from gas to groundwater can occur both in the monitor well and/or outside the monitor well. The objective of this section is to present data indicating that landfill gas is the source of recent vinyl chloride detections in groundwater at MW-02.

4.2.1 Dissolved Methane

Results for the February 2008 sampling event found dissolved methane at 1.3 mg/L in the groundwater sample from MW-02. This is more than 5000 times the methane concentration detected in the background well, MW-01. Methane was also detected in leachate at a similar concentration. If the leachate is the source of the methane in the groundwater, one would expect mixing to result in a much lower concentration in the groundwater than in the leachate; however, if landfill gas is impacting both groundwater and leachate independently, one would expect similar concentrations. Also, as noted above, other organics found in leachate are not found in groundwater (Table 3). These data suggest that methane from landfill gas has impacted the groundwater in the vicinity of MW-02; therefore, it is reasonable to suggest that other VOCs such as vinyl chloride have impacted the groundwater by the same mechanism.

4.2.2 Effects of LFG Extraction System Adjustments

As discussed in Section 3.1, the available vacuum at the gas extraction wells near MW-02 were lower than historical values at the time of the September 2007 groundwater sampling event. The lower vacuums could have resulted in reduced effectiveness of the LFG extraction system to control localized migration of LFG in the immediate vicinity of the landfill. The fact that the first new detections of VOCs in several years corresponded to this period of reduced effectiveness of the LFG system supports the contention that the VOCs are related to LFG.

Again, as discussed in Section 4.1, the LFG header system in the vicinity of the flare was permanently modified in January 2008, which increased the available vacuum across the entire wellfield. The vinyl chloride concentration in MW-02 from the February 2008 sampling event was reduced to below the SWSL standard, indicating that the modification of the LFG system was effective in the remediation of VOC impacts, further supporting the contention the LFG was the source of the impacts in the first place.

4.2.3 Effects of Drought Conditions

Recent drought conditions may also have contributed to the gas impact near MW-02. The summer and fall of 2007 was a period of extreme drought in North Carolina. The drought resulted in a depressed water table and desiccation of the vadose zone, allowing freer migration of gas and reducing the dilution and dispersion of impacts to the groundwater by reducing groundwater flow. It is likely that this was an exacerbating factor contributing to the detection of VOCs in the groundwater at MW-02 during the September 2007 sampling event and the November 2007 resample event.

4.2.4 Groundwater Chemistry

The Stiff diagrams shown in *Chart 1* illustrate the relative concentrations of common anions/cations in the groundwater, including sodium (Na), chlorine (Cl), calcium (Ca), alkalinity (HCO_3), magnesium (Mg), and sulfate (SO_4). Stiff diagrams are commonly used to characterize groundwater from different sources and to help identify sources of groundwater contamination. There are also certain geochemical characteristics that are associated with gas impacts and others associated with leachate impacts that can be observed using Stiff diagrams. As carbon dioxide from the landfill gas dissolves in ground water, it forms carbonic acid, which drives the carbonate reaction forward.

$$\mathbf{H_2O+CO_2(g) \rightarrow H_2CO_3+Ca,Mg(CO_3) \rightarrow Ca,Mg+2HCO_3}$$

Increases in alkalinity, calcium, and magnesium are commonly observed in gas impacted wells. Leachate impacted wells would show increases in inorganics such as chloride, sodium, TOC, COD, and other indicators.

Chart 1 shows Stiff diagrams for MW-01, MW-02, and the site leachate (T01) from the February 2008 sampling event. If MW-02 were significantly impacted by leachate, one would expect the shape of the Stiff diagram for MW-02 to more closely resemble the leachate (T01) than the backgound well (MW-01). The leachate shows proportionally higher concentrations of sodium and chlorine than observed in the two monitoring wells. If MW-02 were impacted by leachate, one would expect to see an increase in sodium and chlorine in MW-02 when compared to MW-01; however, no such increases are observed. The primary differences between MW-01 and MW-02 are increases in calcium and alkalinity in MW-02, both of which are indicators of LFG impact as opposed to leachate impact.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Groundwater and leachate analytical results were evaluated for evidence of both leachate impacts and LFG impacts in the groundwater. This *Alternate Source Demonstration* provides strong evidence that landfill gas is the source of recent VOC detections, particularly vinyl chloride, in groundwater monitoring well MW-02. Adjustments to, and permanent modification of the LFG extraction system have been implemented by PRLC as the presumptive remedy to mitigate any localized landfill gas migration. This investigation found the following:

- Organics detected in the leachate from the site are not found in groundwater and vinyl chloride is not typically detected in site leachate; therefore, it is highly unlikely that the vinyl chloride detected in MW-02 was a result of landfill liquid impact.

- Dissolved methane was detected in MW-02 at a concentration greater than 5000 times the concentration in the background well, MW-01. Although dissolved methane is also found in leachate, other organics found in leachate were not detected in groundwater, indicating that landfill gas has impacted the groundwater.

- Increases in sodium and chloride concentrations, which are indicative of liquid impacts, were not found in MW-02.

- Geochemical changes to groundwater resulting from landfill impact normally include multiple inorganic compounds and increased concentrations of leachate indicator parameters; however, these relationships were not observed in the groundwater samples from MW-02.

- The correlation of VOC detections in MW-02 during a period of reduced vacuum in nearby extraction wells, as well as the decrease in VOCs after permanent modification of the LFG header system in the vicinity of the flare improved available vacuum across the entire wellfield, supports the contention that the VOC impacts are related to LFG. Drought conditions may also have contributed to increased impact by LFG.

These observations all indicate that landfill gas, not landfill liquids, is the most likely source of the VOC detections, and especially of the exceedance of SWSL and NC-2L standards for vinyl chloride in MW-02 during the second semiannual sampling event of 2007 at the PLRC.

5.3 Recommendations

Based on the results of this demonstration and the fact that the presumptive remedy (permanent modification of the LFG extraction system) have been implemented, we recommend the following action:

- Continue with routine detection monitoring for MW-02.

6.0 REFERENCES

Allen, M.R., Braithwaite, A., and Hills, C.C. (1997). *Trace Organic Compounds in Landfill Gas at Seven U.K. Waste Disposal Sites.* Environmental Science and Technology. v. 31, p. 1054-1061.

Cowie, S. (2004). *Emission of Non-methane Organic Compounds (NMOCs) and hazardous air Pollutants (HAPs) from Decomposing Refuse and Individual Waste Components and Under Different Conditions.* Master's Thesis, North Carolina State University.

Deisper, A. and Stegmann, R. (1994). *The Origin and Fate of Volatile Trace Components in Municipal Solid Waste Landfills.* Waste Management & Research. v. 12, p. 129-139.

Piedmont Landfill and Recycling Center
Permit 34-06

TABLE 1: Detected Constituents

September 12-13, 2007 Sampling Event

WELL ID	PARAMETER	RESULT	UNITS	SWSL	NC 2L
3406-MW02	Barium	110	µg/L	100	2000
3406-MW02	Benzene	1.1 (0.98 B)	µg/L	1	1
3406-MW02	Vinyl chloride	1.3 (1.3)	µg/L	1	0.015
3406-MW03	Chromium	12	µg/L	10	50
3406-MW04D	Chromium	10	µg/L	10	50
3406-MW09R	1,1-Dichloroethane	12	µg/L	5	70
3406-MW09R	cis-1,2-Dichloroethene	5.1	µg/L	5	10
3406-MW12	Zinc *	29	µg/L	10	1050

SWSL = NC DENR Solid Waste Section Limits
NC 2L = 15A-NCAC-2L Groundwater Standards
Values in parenthesis ( ) are results from a resampling event copndcuted on November 15, 2007.
B = Estimated Concentration below the SWSL.

This table includes all NC Appendix I or II constituent detections that were quantified above the SWSL. Blank-qualified detections are excluded.
* The zinc detection in MW-12 was flagged by the laboratory as blank-qualified; however, it is included because the concentration in the sample was greater tha five times the blank concentration.

TABLE 2: Vacuum at Gas Extraction Wells near MW-02
(Static Pressure in inches-H_2O)

Date	W-33	W-34	W-35	W-37	W-38	W-39	AVG.
07/17/07	-3.1	-8.9	-3.5	-8.9	-8.8	-7.1	-6.72
08/13/07	-2.8	-8.6	-3			-7.3	-3.83
08/16/07	-0.9			-1.8	-2.4		
09/10/07	-1	-2.2				-1.7	-1.32
09/11/07			-0.5	-1.3	-1.2		
10/09/07	-1.8	-2.5	-4	-2.9	-2.9	-2.4	-2.75
10/24/07	-5.1	-5.2	-3.2	-3.9	-4	-5.1	-4.42
10/26/07	-6.9	-7	-5.1	-5.9	-5.9	-6.9	-6.28
11/12/07	0	-7.3	-5.1			-6.9	-5.33
11/13/07				-6.3	-4.8		
11/16/07	-6.5						
12/11/07	-6.5	-6.8	-4.8	-4.9	-5	-6.5	-5.75
01/07/08	-13.7	-14.6	-10.9	-12.8	-12.7	-14	-13.12

All values represent static pressure at the wellheads in inches of water.

TABLE 3: Analytical Results from February 5, 2008 ASD Sampling Event

PARAMETER	MW-01		MW-02		TO-1		Units
Acetone	NA		NA		4500		µg/L
Benzene	NA		NA		6.3	J	µg/L
2-Butanone (MEK)	NA		NA		2400		µg/L
Carbon Disulfide	NA		NA		16	J	µg/L
1,4-Dichlorobenzene	NA		NA		4.4	J	µg/L
Ethylbenzene	NA		NA		14	J	µg/L
4-Methyl-2-Pentanone	NA		NA		99	J	µg/L
Toluene	NA		NA		14	J	µg/L
Xylenses (total)	NA		NA		60		µg/L
Vinyl Chloride	NA		0.61	J	ND		µg/L
Methane	0.00025	J	1.3		1.8		mg/L
Potassium	8.5		2	B	240		mg/L
Magnesium	1.5		1.5		38		mg/L
Calcium	5.5	J	11	J	40	J	mg/L
Sodium	13		13		790		mg/L
Chloride	3		4.7		710	Q	mg/L
Sulfate	ND		ND		17	B,G	mg/L
Nitrogen (Ammonia)	ND		ND		520	Q	mg/L
Total Dissolved Solids (TDS)	48		110		2200	Q	mg/L
Total Organic Carbon (TOC)	0.56	B, J	0.89	B, J	220	J, Q	mg/L
Bicarbonate Alkalinity (as $CaCO_3$)	26		59		2100		mg/L
Carbonate Alkalinity	ND		ND		ND		mg/L
Total Alkalinity	26	J	59	J	2100	J	mg/L
Free CO_2	430		410		250		mg/L
Field Temperature	14.1		15.9		16.6		ºC
Field Dissolved Oxygen (DO)	5.7		2.8		7.8		mg/L
Field pH	5.09		5.46		7.23		SU
Field EH (ORP)	25.9		-10.7		-54.4		mV
Field Conductivity	70		119		4000		µmhos/cm

J = Estimated result less than the reporting limit (orginaics).

B = Estimated result less than the reporting limit (inorganics).

J = Blank-qualified data (inorganics).

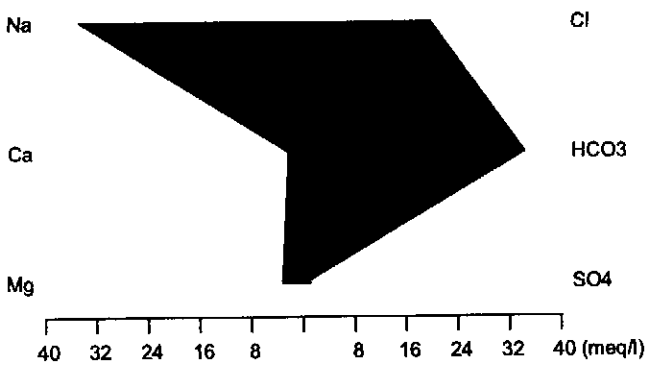
Q = Elevated reporting limit due to high analyte levels.

G = Elevated reporting limit due matrix interferance.

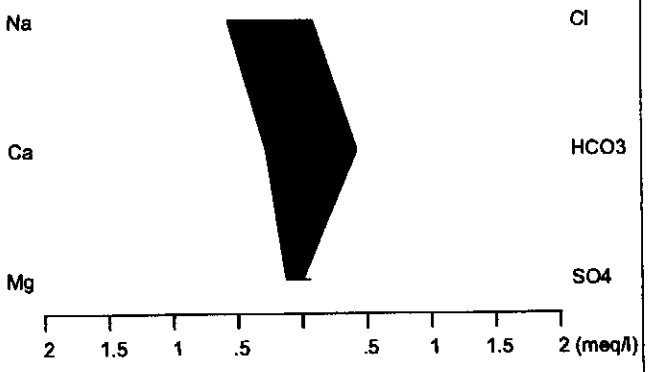
ND = Not detected above the method detection limit.

NA = Not analyzed for this parameter.

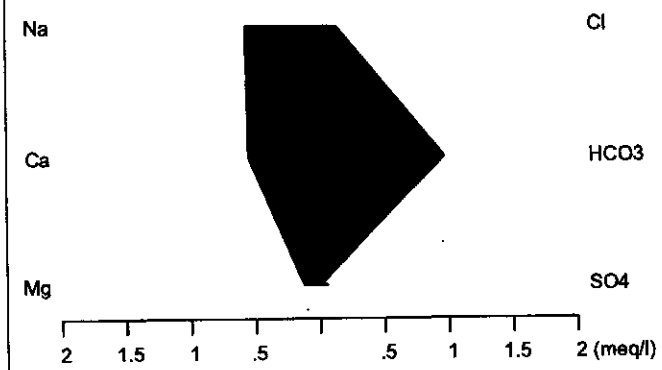
Leachate, 2/5/2008



MW-01, 2/5/2008



MW-02, 2/5/2008



Description: Chart 1: Stiff Diagrams from February 2008 Sampling Event.

JOYCE ENGINEERING, INC.	Project: Piedmont Landfill	Project #: 392.00.79
	Client: Waste Management	Date: 2/21/2008

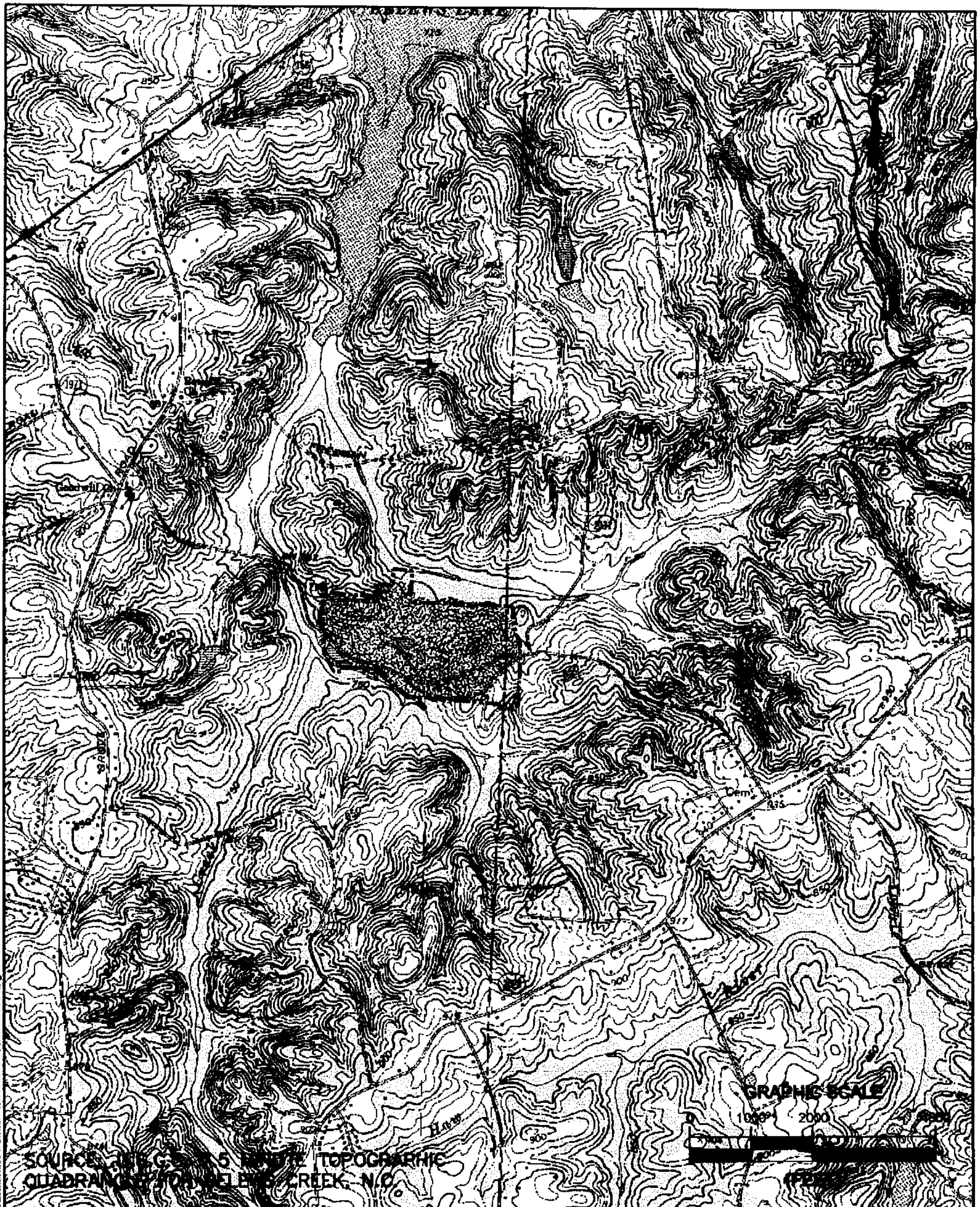


FIGURE NO. 1	JOYCE ENGINEERING, INC. 2211 WEST MEADOWVIEW ROAD GREENSBORO, N.C. 27407 PHONE: (336) 323-0092 © 2008 Joyce Engineering, Inc. All rights reserved.	SCALE 1"=2000'	PROJECT NO. 392.79	PIEDMONT LANDFILL KERNERSVILLE, NORTH CAROLINA SITE LOCATION MAP

APPENDIX A

Laboratory Reports, Chains-of-Custody, and Field Data Forms for February 2008 Sampling Event

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Project No. Site 134

Piedmont Landfill

Lot #: D8B060234

MW01 and MW02

Mark Snyder

Waste Management Inc.
Southern Area
2859 Paces Ferry Road Suite 1600
Atlanta, GA 30339

Cc: Van Burbach

TestAmerica Denver
North Carolina Certification # 358

Betsy Sara
Project Manager

February 21, 2008

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Lot #: D8B060234

Laboratory Control Samples (LCS)

The Laboratory Control Samples were within established control limits.

Matrix Spike and Matrix Spike Duplicate (MS/MSD)

The Matrix Spikes and Matrix Spike Duplicates performed on samples from other clients exhibited MS and/or MSD recoveries outside control limits for Tetrachloroethene Method 8260B and Ammonia Method 350.1. Because the corresponding Laboratory Control Samples and the Method Blank samples were within control limits, these anomalies may be due to matrix interference and no corrective action was taken.

All other MS/MSD samples were within established control limits.

General Chemistry

The analysis for Methane by Method RSK SOP-175 was performed at TestAmerica's Austin facility.
TestAmerica Austin
14046 Summit Drive
Austin, TX 78728
Telephone: 512 244-0855

PREPARATION METHODS SUMMARY

D8B060234

PREPARATION DESCRIPTION	PREPARATION METHOD	ANALYTICAL METHOD
********		NONE Color, Fie
Acid Digestion for Total Recoverable Metals	SW846 3005A	SW846 6010B
Ammonia preparation	MCAWW 350.1	MCAWW 350.1
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Extraction, Water/Gas (Manual)->Equilibration	RSK RSKSOP-175	RSK SOP-175
Field pH	MCAWW 150.1	MCAWW 150.1
Field Conductivity	MCAWW 120.1	MCAWW 120.1
Field Temperature	MCAWW 170.1	MCAWW 170.1
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Free Carbon Dioxide	SM18 4500C	SM18 4500-CO2 C
Potentiometric titration to preselected pH	MCAWW 310.1	MCAWW 310.1
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Total Organic Carbon	MCAWW 415.1	MCAWW 415.1
25 mL Purge-and-Trap	SW846 5030B/826	SW846 8260B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

NONE

RSK Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D8B060234

ANALYTICAL METHOD	ANALYST	ANALYST ID
MCAWW 120.1	Outside Lab	OUT
MCAWW 150.1	Outside Lab	OUT
MCAWW 160.1	ReAnna Davis	002266
MCAWW 170.1	Outside Lab	OUT
MCAWW 300.0A	Ewa Kudla	001167
MCAWW 310.1	Keri Dwire	008821
MCAWW 350.1	Kevin Bloom	006134
MCAWW 415.1	ReAnna Davis	002266
NONE Color, Field	Outside Lab	OUT
RSK SOP-175	Mark T. Maglitto	403649
SM18 4500-CO2 C	Keri Dwire	008821
SW846 6010B	Lynn-Anne Trudell	6645
SW846 8260B	Hauqing Zhou	005417

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

NONE

RSK Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Waste Management, Inc.

Client Sample ID: 3406-MW02

GC/MS Volatiles

Lot-Sample #...: D8B060234-002 **Work Order #...:** KGMH51AA **Matrix.....:** WATER
Date Sampled...: 02/05/08 12:06 **Date Received..:** 02/06/08
Prep Date.....: 02/14/08 **Analysis Date..:** 02/14/08
Prep Batch #...: 8046387 **Analysis Time..:** 13:51
Dilution Factor: 1
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Vinyl chloride	**0.61 J**	**1.0**	**ug/L**	**0.17**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(79 - 119)
1,2-Dichloroethane-d4	108	(65 - 126)
4-Bromofluorobenzene	100	(75 - 115)
Toluene-d8	98	(78 - 118)

NOTE(S):

J Estimated result. Result is less than RL.

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Sept 07

Waste Management, Inc.

Client Sample ID: 3406-MW02

GC Volatiles

Lot-Sample #...:	D8B060234-002	**Work Order #...:**	KGMH51AC	**Matrix.....:**	WATER
Date Sampled...:	02/05/08 12:06	**Date Received..:**	02/06/08		
Prep Date.....:	02/11/08	**Analysis Date..:**	02/11/08		
Prep Batch #...:	8043083	**Analysis Time..:**	10:36		
Dilution Factor:	10				
		Method.....:	RSK SOP-175		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Methane	**1300**	**5.0**	**ug/L**	**2.1**

Waste Management, Inc.

Client Sample ID: 3406-MW02

TOTAL Metals

Lot-Sample #...: D8B060234-002 **Matrix.....:** WATER
Date Sampled...: 02/05/08 12:06 **Date Received..:** 02/06/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8043200						
Potassium	**2000 B**	**3000**	**ug/L**	**SW846 6010B**	**02/13/08**	**KGMH51AH**
		Dilution Factor: 1		Analysis Time..: 14:13	MDL.....: 240	
Magnesium	**1500**	**200**	**ug/L**	**SW846 6010B**	**02/13/08**	**KGMH51AJ**
		Dilution Factor: 1		Analysis Time..: 14:13	MDL.....: 43	
Calcium	**11000 J**	**200**	**ug/L**	**SW846 6010B**	**02/13/08**	**KGMH51AN**
		Dilution Factor: 1		Analysis Time..: 14:13	MDL.....: 34	
Sodium	**13000**	**5000**	**ug/L**	**SW846 6010B**	**02/13/08**	**KGMH51AP**
		Dilution Factor: 1		Analysis Time..: 14:13	MDL.....: 92	

NOTE(S):

B Estimated result. Result is less than RL.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Waste Management, Inc.

Client Sample ID: 3406-MW01

General Chemistry

Lot-Sample #...: D8B060234-001 **Work Order #...:** KGMHD **Matrix.....:** WATER

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids	48	10	mg/L	MCAWW 160.1	02/08/08	8039367
		Dilution Factor: 1		Analysis Time..: 16:00	MDL.....: 4.7	
Total Organic Carbon	0.56 B,J	1.0	mg/L	MCAWW 415.1	02/07/08	8042107
		Dilution Factor: 1		Analysis Time..: 17:00	MDL.....: 0.16	

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

Waste Management, Inc.

Client Sample ID: 3406-MW02

General Chemistry

Lot-Sample #...: D8B060234-002 Work Order #...: KGMH5 Matrix.....: WATER

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity	59 J	5.0	mg/L	MCAWW 310.1	02/09/08	8041020
		Dilution Factor: 1		Analysis Time..: 23:00	MDL.....: 1.1	
Total Dissolved Solids	110	10	mg/L	MCAWW 160.1	02/08/08	8039367
		Dilution Factor: 1		Analysis Time..: 16:00	MDL.....: 4.7	
Total Organic Carbon	0.89 B,J	1.0	mg/L	MCAWW 415.1	02/07/08	8042107
		Dilution Factor: 1		Analysis Time..: 17:00	MDL.....: 0.16	

NOTE(S):

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D8B060234 **Work Order #...:** KG7GX1AA **Matrix.....:** WATER
MB Lot-Sample #: D8B150000-387

Prep Date.....: 02/14/08 **Analysis Time..:** 13:03
Analysis Date..: 02/14/08 **Prep Batch #...:** 8046387
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Vinyl chloride	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(79 - 119)
1,2-Dichloroethane-d4	111	(65 - 126)
4-Bromofluorobenzene	101	(75 - 115)
Toluene-d8	101	(78 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D8B060234 **Work Order #...:** KG7GX1AC **Matrix.....:** WATER
LCS Lot-Sample#: D8B150000-387
Prep Date.....: 02/14/08 **Analysis Date..:** 02/14/08
Prep Batch #...: 8046387 **Analysis Time..:** 12:14
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1-Dichloroethene	**10.0**	**9.12**	**ug/L**	**91**	**SW846 8260B**
Benzene	**10.0**	**9.07**	**ug/L**	**91**	**SW846 8260B**
Chlorobenzene	**10.0**	**8.20**	**ug/L**	**82**	**SW846 8260B**
Toluene	**10.0**	**8.30**	**ug/L**	**83**	**SW846 8260B**
Trichloroethene	**10.0**	**9.04**	**ug/L**	**90**	**SW846 8260B**
Chloroform	**10.0**	**9.33**	**ug/L**	**93**	**SW846 8260B**
1,3-Dichlorobenzene	**10.0**	**8.48**	**ug/L**	**85**	**SW846 8260B**
1,1-Dichloroethane	**10.0**	**9.51**	**ug/L**	**95**	**SW846 8260B**
1,2-Dichloropropane	**10.0**	**9.36**	**ug/L**	**94**	**SW846 8260B**
Ethylbenzene	**10.0**	**8.54**	**ug/L**	**85**	**SW846 8260B**
Methylene chloride	**10.0**	**7.81**	**ug/L**	**78**	**SW846 8260B**
Tetrachloroethene	**10.0**	**7.65**	**ug/L**	**77**	**SW846 8260B**
1,1,1-Trichloroethane	**10.0**	**9.82**	**ug/L**	**98**	**SW846 8260B**
Carbon tetrachloride	**10.0**	**9.50**	**ug/L**	**95**	**SW846 8260B**
trans-1,2-Dichloroethene	**10.0**	**8.46**	**ug/L**	**85**	**SW846 8260B**
Bromodichloromethane	**10.0**	**9.11**	**ug/L**	**91**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(79 - 119)
1,2-Dichloroethane-d4	110	(65 - 126)
4-Bromofluorobenzene	97	(75 - 115)
Toluene-d8	97	(78 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D8B060234 **Work Order #...:** KG7A21AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D7J080153-091 KG7A21AD-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(75 - 115)
	99	(75 - 115)
Toluene-d8	99	(78 - 118)
	100	(78 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D8B060234 **Work Order #...:** KG7A21AC-MS **Matrix.....:** WATER
MS Lot-Sample #: D7J080153-091 KG7A21AD-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
4-Bromofluorobenzene	99	(75 - 115)
	99	(75 - 115)
Toluene-d8	99	(78 - 118)
	100	(78 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: D8B060234 **Work Order #...:** KGXVM1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I8B120000-083 KGXVM1AD-LCSD
Prep Date.....: 02/11/08 **Analysis Date..:** 02/11/08
Prep Batch #...: 8043083 **Analysis Time..:** 09:44
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	**109**	**(40 - 130)**			**RSK SOP-175**
	107	**(40 - 130)**	**2.6**	**(0-20)**	**RSK SOP-175**
Ethane	**109**	**(32 - 131)**			**RSK SOP-175**
	107	**(32 - 131)**	**2.5**	**(0-20)**	**RSK SOP-175**
Ethene	**108**	**(32 - 148)**			**RSK SOP-175**
	106	**(32 - 148)**	**2.7**	**(0-20)**	**RSK SOP-175**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC Volatiles

Client Lot #...: D8B060234 **Work Order #...:** KGRLM1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: I8B080135-002 KGRLM1AD-MSD
Date Sampled...: 02/04/08 13:50 **Date Received..:** 02/08/08
Prep Date.....: 02/11/08 **Analysis Date..:** 02/11/08
Prep Batch #...: 8043083 **Analysis Time..:** 12:11
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Methane	**97**	**(40 - 130)**			**RSK SOP-175**
	105	**(40 - 130)**	**7.4**	**(0-20)**	**RSK SOP-175**
Ethane	**98**	**(32 - 131)**			**RSK SOP-175**
	104	**(32 - 131)**	**8.7**	**(0-20)**	**RSK SOP-175**
Ethene	**96**	**(32 - 148)**			**RSK SOP-175**
	104	**(32 - 148)**	**11**	**(0-20)**	**RSK SOP-175**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: D8B060234 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: D8B120000-200 **Prep Batch #...:** 8043200						
Potassium	ND	3000	ug/L	SW846 6010B	02/13/08	KGX621CA
		Dilution Factor: 1				
		Analysis Time..: 13:42				
Magnesium	ND	200	ug/L	SW846 6010B	02/13/08	KGX621CC
		Dilution Factor: 1				
		Analysis Time..: 13:42				
Calcium	**68 B**	**200**	**ug/L**	**SW846 6010B**	**02/13/08**	**KGX621CD**
		Dilution Factor: 1				
		Analysis Time..: 13:42				
Sodium	ND	5000	ug/L	SW846 6010B	02/13/08	KGX621CE
		Dilution Factor: 1				
		Analysis Time..: 13:42				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8B060234 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: D8B120000-200 **Prep Batch #...:** 8043200							
Potassium	50000	46200	ug/L	92	SW846 6010B	02/13/08	KGX621CF
			Dilution Factor: 1		Analysis Time..: 13:47		
Magnesium	50000	46100	ug/L	92	SW846 6010B	02/13/08	KGX621CG
			Dilution Factor: 1		Analysis Time..: 13:47		
Calcium	50000	46900	ug/L	94	SW846 6010B	02/13/08	KGX621CH
			Dilution Factor: 1		Analysis Time..: 13:47		
Sodium	50000	45400	ug/L	91	SW846 6010B	02/13/08	KGX621CJ
			Dilution Factor: 1		Analysis Time..: 13:47		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8B060234 **Matrix.....:** WATER
Date Sampled...: 02/05/08 10:48 **Date Received..:** 02/06/08

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8B060234-001 **Prep Batch #...:** 8043200									
Potassium									
	8500	50000	53600	ug/L	90		SW846 6010B	02/13/08	KGMHD1A0
	8500	50000	55400	ug/L	94	3.2	SW846 6010B	02/13/08	KGMHD1A1
			Dilution Factor: 1						
			Analysis Time..: 16:51						
Magnesium									
	1500	50000	48900	ug/L	95		SW846 6010B	02/13/08	KGMHD1A2
	1500	50000	50800	ug/L	99	3.9	SW846 6010B	02/13/08	KGMHD1A3
			Dilution Factor: 1						
			Analysis Time..: 16:51						
Calcium									
	5500	50000	53800	ug/L	97		SW846 6010B	02/13/08	KGMHD1A4
	5500	50000	55900	ug/L	101	3.8	SW846 6010B	02/13/08	KGMHD1A5
			Dilution Factor: 1						
			Analysis Time..: 16:51						
Sodium									
	13000	50000	54700	ug/L	82		SW846 6010B	02/13/08	KGMHD1A6
	13000	50000	56200	ug/L	85	2.6	SW846 6010B	02/13/08	KGMHD1A7
			Dilution Factor: 1						
			Analysis Time..: 16:51						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: D8B060234 **Matrix.....:** WATER
Date Sampled...: 02/05/08 08:42 **Date Received..:** 02/06/08

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8B060255-001 **Prep Batch #...:** 8043200									
Potassium									
	560	50000	48400	ug/L	96		SW846 6010B	02/13/08	KGMPV1C3
	560	50000	49700	ug/L	98	2.5	SW846 6010B	02/13/08	KGMPV1C4
			Dilution Factor: 1						
			Analysis Time..: 14:03						
Magnesium									
	1100	50000	48400	ug/L	94		SW846 6010B	02/13/08	KGMPV1C6
	1100	50000	49700	ug/L	97	2.8	SW846 6010B	02/13/08	KGMPV1C7
			Dilution Factor: 1						
			Analysis Time..: 14:03						
Calcium									
	860	50000	48900	ug/L	96		SW846 6010B	02/13/08	KGMPV1C9
	860	50000	50200	ug/L	99	2.7	SW846 6010B	02/13/08	KGMPV1DA
			Dilution Factor: 1						
			Analysis Time..: 14:03						
Sodium									
	2500	50000	49500	ug/L	94		SW846 6010B	02/13/08	KGMPV1DD
	2500	50000	50900	ug/L	97	2.8	SW846 6010B	02/13/08	KGMPV1DE
			Dilution Factor: 1						
			Analysis Time..: 14:03						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: D8B060234 **Matrix.....:** WATER

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: D8B060234 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Ammonia as N			WO#:KGX0A1AC-LCS/KGX0A1AD-LCSD			LCS Lot-Sample#: D8B120000-137		
	4.00	4.08	mg/L	102		MCAWW 350.1	02/11/08	8043137
	4.00	4.11	mg/L	103	0.80	MCAWW 350.1	02/11/08	8043137
			Dilution Factor: 1			Analysis Time..: 10:00		
Chloride			WO#:KGREK1AC-LCS/KGREK1AD-LCSD			LCS Lot-Sample#: D8B080000-085		
	25.0	25.3	mg/L	101		MCAWW 300.0A	02/07/08	8039085
	25.0	24.8	mg/L	99	2.4	MCAWW 300.0A	02/07/08	8039085
			Dilution Factor: 1			Analysis Time..: 13:32		
Sulfate			WO#:KGRE11AC-LCS/KGRE11AD-LCSD			LCS Lot-Sample#: D8B080000-086		
	25.0	25.0	mg/L	100		MCAWW 300.0A	02/07/08	8039086
	25.0	24.6	mg/L	98	1.8	MCAWW 300.0A	02/07/08	8039086
			Dilution Factor: 1			Analysis Time..: 13:32		
Total Alkalinity			WO#:KGWEV1AC-LCS/KGWEV1AD-LCSD			LCS Lot-Sample#: D8B100000-020		
	200	198	mg/L	99		MCAWW 310.1	02/09/08	8041020
	200	211	mg/L	106	6.4	MCAWW 310.1	02/09/08	8041020
			Dilution Factor: 1			Analysis Time..: 23:00		
Total Dissolved Solids			WO#:KG1PT1AC-LCS/KG1PT1AD-LCSD			LCS Lot-Sample#: D8B080000-367		
	500	466	mg/L	93		MCAWW 160.1	02/08/08	8039367
	500	457	mg/L	91	2.0	MCAWW 160.1	02/08/08	8039367
			Dilution Factor: 1			Analysis Time..: 16:00		
Total Organic Carbon			WO#:KGXHL1AC-LCS/KGXHL1AD-LCSD			LCS Lot-Sample#: D8B110000-107		
	25.0	25.3	mg/L	101		MCAWW 415.1	02/07/08	8042107
	25.0	24.9	mg/L	100	1.5	MCAWW 415.1	02/07/08	8042107
			Dilution Factor: 1			Analysis Time..: 16:00		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: D8B060234 **Matrix.....:** WATER
Date Sampled...: 02/06/08 10:39 **Date Received..:** 02/07/08

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Ammonia as N			WO#: KGKT81AE-MS/KGKT81AF-MSD				MS Lot-Sample #: D8B050252-002		
	1.4	4.10	4.54 N	mg/L	77		MCAWW 350.1	02/11/08	8043137
	1.4	4.10	4.46 N	mg/L	75	1.6	MCAWW 350.1	02/11/08	8043137
			Dilution Factor: 1						
			Analysis Time..: 10:00						
Ammonia as N			WO#: KGPXF1A7-MS/KGPXF1A8-MSD				MS Lot-Sample #: D8B070249-008		
	0.22	4.00	3.61 N	mg/L	85		MCAWW 350.1	02/11/08	8043137
	0.22	4.00	3.60 N	mg/L	84	0.49	MCAWW 350.1	02/11/08	8043137
			Dilution Factor: 1						
			Analysis Time..: 10:00						
Chloride			WO#: KF9GR1CD-MS/KF9GR1CE-MSD				MS Lot-Sample #: D8A290265-002		
	7.7	25.0	33.2	mg/L	102		MCAWW 300.0A	02/07/08	8039085
	7.7	25.0	33.5	mg/L	103	1.1	MCAWW 300.0A	02/07/08	8039085
			Dilution Factor: 1						
			Analysis Time..: 15:16						
Sulfate			WO#: KF9GR1CF-MS/KF9GR1CG-MSD				MS Lot-Sample #: D8A290265-002		
	8.1	25.0	33.5	mg/L	102		MCAWW 300.0A	02/07/08	8039086
	8.1	25.0	33.6	mg/L	102	0.56	MCAWW 300.0A	02/07/08	8039086
			Dilution Factor: 1						
			Analysis Time..: 15:16						
Total Organic Carbon			WO#: KGMH51A1-MS/KGMH51A2-MSD				MS Lot-Sample #: D8B060234-002		
	0.89	25.0	25.5	mg/L	98		MCAWW 415.1	02/07/08	8042107
	0.89	25.0	25.5	mg/L	98	0.07	MCAWW 415.1	02/07/08	8042107
			Dilution Factor: 1						
			Analysis Time..: 18:00						

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: D8B060234 **Work Order #...:** KGFE2-SMP KGFE2-DUP **Matrix.....:** WATER

Date Sampled...: 01/30/08 12:26 **Date Received..:** 02/01/08

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity						SD Lot-Sample #: D8B010186-001		
	ND	ND	mg/L	0	(0-10)	MCAWW 310.1	02/09/08	8041020

Dilution Factor: 1 Analysis Time..: 23:00

FIELD INFORMATION FORM

WASTE MANAGEMENT

Site Name: Piedmont LF
Site No.: 134 Sample Point: MW01 (Sample ID)

This Waste Management Field Information Form is Required
This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: 08060234-001

PURGE INFO

PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED
02/05/08	1030	0:18	09	10	1 1

Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.

PURGE/SAMPLE EQUIPMENT

Purging and Sampling Equipment ... Dedicated: (Y) or N
Filter Device: Y or (N) 0.45 µ or _____ µ (circle or fill in)
Purging Device: C — A- Submersible Pump, B-Peristaltic Pump, C-QED Bladder Pump, D-Bailer, E-Piston Pump, F-Dipper/Bottle
Sampling Device: C
Filter Type: _____ — A-In-line Disposable, B-Pressure, C-Vacuum, X-Other _____
X-Other: _____
Sample Tube Type: D/C — A-Teflon, B-Stainless Steel, C-PVC, D-Polypropylene, X-Other: _____

WELL DATA

Well Elevation (at TOC)	Depth to Water (DTW) (from TOC)	Groundwater Elevation (site datum, from TOC)
8239.3 (ft/msl)	436.4 (ft)	818.57 (ft/msl)

Total Well Depth (from TOC): 490.0 (ft) — Stick Up (from ground elevation): _____ (ft) — Casing ID: 02 (in) — Casing Material: PVC

Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.

STABILIZATION DATA (Optional)

Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) (µmhos/cm @ 25 °C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
1030	1st	6.40	1st 58	13.2	10.8	4.5	-20	439
1033	2nd	5.99	2nd 73	13.9	7.5	5.1	109	439
1036	3rd	5.71	3rd 74	14.0	6.9	5.4	197	439
1039	4th	5.26	4th 77	14.1	6.5	5.5	250	439
1042		5.11	70	14.1	5.4	5.9	300	439
1045		5.14	69	14.1	5.1	5.7	256	439
1048		5.09	70	14.1	~~9.3~~	5.7	259	439
					4.0			

Suggested range for 3 consec. readings or note Permit/State requirements: +/- 0.2 | +/- 3% | -- | -- | +/- 10% | +/- 25 mV | Stabilize

Stabilization Data Fields are Optional *(i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.*

FIELD DATA

SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE (umhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: BTW Units: Ft
02/05/08	5.09	70	14.1	4.0 ~~5.1~~	5.7	259	43.9

Final Field Readings are required *(i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site.*

Sample Appearance: Clear — Odor: — — Color: — — Other: _____

Weather Conditions (required daily, or as conditions change): Direction/Speed: E 0-5 — Outlook: P. Cloudy — Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):

FIELD COMMENTS

System Volume: 1380 mL — FLOW CELL VOL: 500mL
Purge Rate: 200 mL/min
PSI setting: 50 psi
Well condition: GOOD, WELL PAD CAULK MAYBE DEVOLOPING CRACKS AGAIN
Sample time: 10:48

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

Date	Name	Signature	Company
2/5/08	Daniel Mutner	DANIEL GIRDNER	JEI
02/05/08	Robert L Winfield	R. Winfield	JEI

Test America

DISTRIBUTION: WHITE/ORIGINAL - Stays with Sample, YELLOW - Returned to Client, PINK - Field Copy

STL-8029WM R: 12/00

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Project No. Site 134

Piedmont Landfill

Lot #: D8B060251

T01

Mark Snyder

Waste Management Inc.
Southern Area
2859 Paces Ferry Road Suite 1600
Atlanta, GA 30339

Cc: Van Burbach

TestAmerica Denver
North Carolina Certification # 358

Betsy Sara
Project Manager

February 22, 2008

RECEIVED FEB 25 2008

Table Of Contents

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Lot #: D8B060251

Method Blanks

Total Calcium Method 6010B, Total Alkalinity Method 310.1 and Total Organic Carbon (TOC) Method 415.1 were detected in the Method Blanks below the project established reporting limits. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blanks were within established control limits.

Laboratory Control Samples (LCS)

The Laboratory Control Samples were within established control limits.

Matrix Spike and Matrix Spike Duplicate (MS/MSD)

The Matrix Spikes and Matrix Spike Duplicates performed on samples from other clients exhibited MS and/or MSD recoveries outside control limits for Tetrachloroethene Method 8260B and Ammonia Method 350.1. Because the corresponding Laboratory Control Samples and the Method Blank samples were within control limits, these anomalies may be due to matrix interference and no corrective action was taken.

All other MS/MSD samples were within established control limits.

Organics

The Method 8260B reporting limits for the sample 3406-T01 are elevated due to high levels of target analytes.

General Chemistry

The analysis for Methane by Method RSK SOP-175 was performed at TestAmerica's Austin facility.
TestAmerica Austin
14046 Summit Drive
Austin, TX 78728
Telephone: 512 244-0855

PREPARATION METHODS SUMMARY

D8B060251

PREPARATION DESCRIPTION	PREPARATION METHOD	ANALYTICAL METHOD
Acid Digestion for Total Recoverable Metals	SW846 3005A	SW846 6010B
Ammonia preparation	MCAWW 350.1	MCAWW 350.1
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Extraction, Water/Gas (Manual)->Equilibration	RSK RSKSOP-175	RSK SOP-175
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Free Carbon Dioxide	SM18 4500C	SM18 4500-CO2 C
Potentiometric titration to preselected pH	MCAWW 310.1	MCAWW 310.1
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Total Organic Carbon	MCAWW 415.1	MCAWW 415.1
25 mL Purge-and-Trap	SW846 5030B/826	SW846 8260B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

RSK Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

D8B060251

ANALYTICAL METHOD	ANALYST	ANALYST ID
MCAWW 160.1	ReAnna Davis	002266
MCAWW 300.0A	Ewa Kudla	001167
MCAWW 310.1	Keri Dwire	008821
MCAWW 350.1	Kevin Bloom	006134
MCAWW 415.1	ReAnna Davis	002266
RSK SOP-175	Mark T. Maglitto	403649
SM18 4500-CO2 C	Keri Dwire	008821
SW846 6010B	Lynn-Anne Trudell	6645
SW846 8260B	Hauqing Zhou	005417

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

RSK Sample Prep and Calculations for Dissolved Gas Analysis in Water Samples Using a GC Headspace Equilibration Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

SM18 "Standard Methods for the Examination of Water and Wastewater", 18th Edition, 1992.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

Waste Management, Inc.

Client Sample ID: 3406-T01

GC/MS Volatiles

Lot-Sample #...: D8B060251-001 **Work Order #...:** KGMPA1AF **Matrix.....:** WATER
Date Sampled...: 02/05/08 12:40 **Date Received..:** 02/06/08
Prep Date.....: 02/12/08 **Analysis Date..:** 02/14/08
Prep Batch #...: 8045408 **Analysis Time..:** 16:48
Dilution Factor: 10

Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acrylonitrile	ND	2000	ug/L	14
Benzene	**6.3 J**	**30**	**ug/L**	**1.6**
Bromochloromethane	ND	30	ug/L	1.0
Bromodichloromethane	ND	30	ug/L	1.7
Bromoform	ND	30	ug/L	1.9
Bromomethane	ND	100	ug/L	2.1
2-Butanone (MEK)	**2400**	**1000**	**ug/L**	**18**
Carbon disulfide	**16 J**	**1000**	**ug/L**	**4.5**
Carbon tetrachloride	ND	55	ug/L	1.9
Chlorobenzene	ND	30	ug/L	1.7
Dibromochloromethane	ND	30	ug/L	1.7
Chloroethane	ND	100	ug/L	4.1
Chloroform	ND	50	ug/L	1.6
Chloromethane	ND	55	ug/L	3.0
1,2-Dibromo-3-chloropropane (DBCP)	ND	130	ug/L	15
1,2-Dibromoethane (EDB)	ND	30	ug/L	1.8
Dibromomethane	ND	100	ug/L	1.7
1,2-Dichlorobenzene	ND	100	ug/L	1.3
1,4-Dichlorobenzene	**4.4 J**	**30**	**ug/L**	**1.6**
trans-1,4-Dichloro-2-butene	ND	1000	ug/L	8.0
1,1-Dichloroethane	ND	50	ug/L	1.6
1,2-Dichloroethane	ND	30	ug/L	1.3
cis-1,2-Dichloroethene	ND	50	ug/L	1.5
trans-1,2-Dichloroethene	ND	50	ug/L	1.5
1,1-Dichloroethene	ND	50	ug/L	1.4
1,2-Dichloropropane	ND	30	ug/L	1.3
cis-1,3-Dichloropropene	ND	55	ug/L	1.6
trans-1,3-Dichloropropene	ND	55	ug/L	1.9
Ethylbenzene	**14 J**	**50**	**ug/L**	**1.6**
2-Hexanone	ND	500	ug/L	14
Iodomethane	ND	100	ug/L	2.3
Methylene chloride	ND	55	ug/L	3.2
4-Methyl-2-pentanone	**99 J**	**1000**	**ug/L**	**4.9**
Styrene	ND	100	ug/L	1.7
1,1,1,2-Tetrachloroethane	ND	50	ug/L	1.7
1,1,2,2-Tetrachloroethane	ND	30	ug/L	2.0

(Continued on next page)

Waste Management, Inc.

Client Sample ID: 3406-T01

GC/MS Volatiles

Lot-Sample #...: D8B060251-001 **Work Order #...:** KGMPA2AF **Matrix.....:** WATER
Date Sampled...: 02/05/08 12:40 **Date Received..:** 02/06/08
Prep Date.....: 02/12/08 **Analysis Date..:** 02/14/08
Prep Batch #...: 8045408 **Analysis Time..:** 16:24
Dilution Factor: 40
Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Acetone	**4500**	**4000**	**ug/L**	**76**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(79 - 119)
1,2-Dichloroethane-d4	111	(65 - 126)
4-Bromofluorobenzene	102	(75 - 115)
Toluene-d8	100	(78 - 118)

Waste Management, Inc.

Client Sample ID: TRIP BLANK

GC/MS Volatiles

Lot-Sample #...: D8B060251-002 **Work Order #...:** KGMPH1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
1,1,2,2-Tetrachloroethane	ND	3.0	ug/L	0.20
Tetrachloroethene	ND	3.0	ug/L	0.20
Toluene	ND	5.0	ug/L	0.17
1,1,1-Trichloroethane	ND	5.0	ug/L	0.16
1,1,2-Trichloroethane	ND	5.0	ug/L	0.32
Trichloroethene	ND	3.0	ug/L	0.16
Trichlorofluoromethane	ND	5.0	ug/L	0.29
1,2,3-Trichloropropane	ND	8.0	ug/L	0.27
Vinyl acetate	ND	50	ug/L	0.94
Vinyl chloride	ND	5.5	ug/L	0.17
Xylenes (total)	ND	4.0	ug/L	0.19

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(79 - 119)
1,2-Dichloroethane-d4	111	(65 - 126)
4-Bromofluorobenzene	99	(75 - 115)
Toluene-d8	99	(78 - 118)

NOTE(S):

J Estimated result. Result is less than RL.

Waste Management, Inc.

Client Sample ID: 3406-T01

TOTAL Metals

Lot-Sample #...: D8B060251-001 **Matrix.....:** WATER
Date Sampled...: 02/05/08 12:40 **Date Received..:** 02/06/08

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 8043200						
Potassium	**240000**	**3000**	**ug/L**	**SW846 6010B**	**02/13/08**	**KGMPA1AH**
		Dilution Factor: 1		Analysis Time..: 14:18	MDL.....: 240	
Magnesium	**38000**	**200**	**ug/L**	**SW846 6010B**	**02/13/08**	**KGMPA1AJ**
		Dilution Factor: 1		Analysis Time..: 14:18	MDL.....: 43	
Calcium	**40000 J**	**200**	**ug/L**	**SW846 6010B**	**02/13/08**	**KGMPA1AN**
		Dilution Factor: 1		Analysis Time..: 14:18	MDL.....: 34	
Sodium	**790000**	**5000**	**ug/L**	**SW846 6010B**	**02/13/08**	**KGMPA1AP**
		Dilution Factor: 1		Analysis Time..: 14:18	MDL.....: 92	

NOTE(S):

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

Waste Management, Inc.

Client Sample ID: 3406-T01

General Chemistry

Lot-Sample #...: D8B060251-001 **Work Order #...:** KGMPA **Matrix.....:** WATER

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity	**2100 J**	**5.0**	**mg/L**	**MCAWW 310.1**	**02/07/08**	**8040130**
		Dilution Factor: 1		Analysis Time..: 18:00	MDL.....: 1.1	
Total Dissolved Solids	**2200 Q**	**20**	**mg/L**	**MCAWW 160.1**	**02/07/08**	**8038396**
		Dilution Factor: 2		Analysis Time..: 17:00	MDL.....: 9.4	
Total Organic Carbon	**220 J,Q**	**20**	**mg/L**	**MCAWW 415.1**	**02/07/08**	**8042107**
		Dilution Factor: 20		Analysis Time..: 18:00	MDL.....: 3.1	

NOTE(S):

RL Reporting Limit

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

LT RPD calc. does not provide useful info due to sample weight variation.

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: D8B060251 **Work Order #...:** KG6QT1AA **Matrix.....:** WATER
MB Lot-Sample #: D8B140000-408

Prep Date.....: 02/12/08 **Analysis Time..:** 13:03
Analysis Date..: 02/14/08 **Prep Batch #...:** 8045408
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Acetone	ND	100	ug/L	SW846 8260B
Acrylonitrile	ND	200	ug/L	SW846 8260B
Benzene	ND	3.0	ug/L	SW846 8260B
Bromochloromethane	ND	3.0	ug/L	SW846 8260B
Bromodichloromethane	ND	3.0	ug/L	SW846 8260B
Bromoform	ND	3.0	ug/L	SW846 8260B
Bromomethane	ND	10	ug/L	SW846 8260B
2-Butanone (MEK)	ND	100	ug/L	SW846 8260B
Carbon disulfide	ND	100	ug/L	SW846 8260B
Carbon tetrachloride	ND	5.5	ug/L	SW846 8260B
Chlorobenzene	ND	3.0	ug/L	SW846 8260B
Dibromochloromethane	ND	3.0	ug/L	SW846 8260B
Chloroethane	ND	10	ug/L	SW846 8260B
Chloroform	ND	5.0	ug/L	SW846 8260B
Chloromethane	ND	5.5	ug/L	SW846 8260B
1,2-Dibromo-3-chloropropane (DBCP)	ND	13	ug/L	SW846 8260B
1,2-Dibromoethane (EDB)	ND	3.0	ug/L	SW846 8260B
Dibromomethane	ND	10	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	3.0	ug/L	SW846 8260B
trans-1,4-Dichloro-2-butene	ND	100	ug/L	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	3.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	5.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	5.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	5.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	3.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	5.5	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	5.5	ug/L	SW846 8260B
Ethylbenzene	ND	5.0	ug/L	SW846 8260B
2-Hexanone	ND	50	ug/L	SW846 8260B
Iodomethane	ND	10	ug/L	SW846 8260B
Methylene chloride	ND	5.5	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	100	ug/L	SW846 8260B
Styrene	ND	10	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	5.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	3.0	ug/L	SW846 8260B
Tetrachloroethene	ND	3.0	ug/L	SW846 8260B
Toluene	ND	5.0	ug/L	SW846 8260B

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D8B060251 **Work Order #...:** KG6QT1AC **Matrix.....:** WATER
LCS Lot-Sample#: D8B140000-408
Prep Date.....: 02/12/08 **Analysis Date..:** 02/14/08
Prep Batch #...: 8045408 **Analysis Time..:** 12:14
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Benzene	**91**	**(77 - 118)**	**SW846 8260B**
1,3-Dichlorobenzene	**85**	**(75 - 115)**	**SW846 8260B**
Bromodichloromethane	**91**	**(78 - 118)**	**SW846 8260B**
Carbon tetrachloride	**95**	**(80 - 120)**	**SW846 8260B**
Chlorobenzene	**82**	**(78 - 118)**	**SW846 8260B**
Chloroform	**93**	**(78 - 118)**	**SW846 8260B**
1,1-Dichloroethane	**95**	**(77 - 117)**	**SW846 8260B**
trans-1,2-Dichloroethene	**85**	**(80 - 120)**	**SW846 8260B**
1,1-Dichloroethene	**91**	**(68 - 133)**	**SW846 8260B**
1,2-Dichloropropane	**94**	**(76 - 116)**	**SW846 8260B**
Ethylbenzene	**85**	**(78 - 118)**	**SW846 8260B**
Methylene chloride	**78**	**(71 - 119)**	**SW846 8260B**
Tetrachloroethene	**77**	**(77 - 117)**	**SW846 8260B**
Toluene	**83**	**(73 - 120)**	**SW846 8260B**
1,1,1-Trichloroethane	**98**	**(78 - 118)**	**SW846 8260B**
Trichloroethene	**90**	**(78 - 122)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(79 - 119)
1,2-Dichloroethane-d4	110	(65 - 126)
4-Bromofluorobenzene	97	(75 - 115)
Toluene-d8	97	(78 - 118)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: D8B060251 Work Order #...: KGKLK1AD-MS Matrix.....: WATER
MS Lot-Sample #: D8B050227-012 KGKLK1AE-MSD
Date Sampled...: 02/04/08 11:45 Date Received..: 02/05/08
Prep Date.....: 02/12/08 Analysis Date..: 02/14/08
Prep Batch #...: 8045408 Analysis Time..: 17:12
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Benzene	100	(77 - 118)			SW846 8260B
	100	(77 - 118)	0.26	(0-20)	SW846 8260B
1,3-Dichlorobenzene	93	(75 - 115)			SW846 8260B
	94	(75 - 115)	1.3	(0-20)	SW846 8260B
Bromodichloromethane	98	(78 - 118)			SW846 8260B
	100	(78 - 118)	2.7	(0-20)	SW846 8260B
Carbon tetrachloride	108	(80 - 120)			SW846 8260B
	102	(80 - 120)	5.7	(0-21)	SW846 8260B
Chlorobenzene	94	(78 - 118)			SW846 8260B
	92	(78 - 118)	2.5	(0-20)	SW846 8260B
Chloroform	103	(78 - 118)			SW846 8260B
	106	(78 - 118)	2.6	(0-20)	SW846 8260B
1,1-Dichloroethane	106	(77 - 117)			SW846 8260B
	105	(77 - 117)	1.3	(0-21)	SW846 8260B
trans-1,2-Dichloroethene	97	(80 - 120)			SW846 8260B
	92	(80 - 120)	4.8	(0-24)	SW846 8260B
1,1-Dichloroethene	104	(68 - 133)			SW846 8260B
	97	(68 - 133)	7.0	(0-20)	SW846 8260B
1,2-Dichloropropane	104	(76 - 116)			SW846 8260B
	104	(76 - 116)	0.24	(0-20)	SW846 8260B
Ethylbenzene	106	(78 - 118)			SW846 8260B
	95	(78 - 118)	10	(0-26)	SW846 8260B
Methylene chloride	87	(71 - 119)			SW846 8260B
	90	(71 - 119)	3.3	(0-20)	SW846 8260B
Tetrachloroethene	82	(77 - 117)			SW846 8260B
	63 a	(77 - 117)	5.9	(0-20)	SW846 8260B
Toluene	93	(73 - 120)			SW846 8260B
	91	(73 - 120)	1.1	(0-20)	SW846 8260B
1,1,1-Trichloroethane	109	(78 - 118)			SW846 8260B
	107	(78 - 118)	1.8	(0-20)	SW846 8260B
Trichloroethene	100	(78 - 122)			SW846 8260B
	97	(78 - 122)	2.4	(0-20)	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(79 - 119)
	97	(79 - 119)
1,2-Dichloroethane-d4	110	(65 - 126)
	115	(65 - 126)

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Volatiles

Client Lot #...: D8B060251 **Work Order #...:** KGKLK1AD-MS **Matrix.....:** WATER
MS Lot-Sample #: D8B050227-012 KGKLK1AE-MSD
Date Sampled...: 02/04/08 11:45 **Date Received..:** 02/05/08
Prep Date.....: 02/12/08 **Analysis Date..:** 02/14/08
Prep Batch #...: 8045408 **Analysis Time..:** 17:12
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Benzene	1.6	10.0	11.6	ug/L	100		SW846 8260B
	1.6	10.0	11.6	ug/L	100	0.26	SW846 8260B
1,3-Dichlorobenzene	ND	10.0	9.25	ug/L	93		SW846 8260B
	ND	10.0	9.37	ug/L	94	1.3	SW846 8260B
Bromodichloromethane	ND	10.0	9.76	ug/L	98		SW846 8260B
	ND	10.0	10.0	ug/L	100	2.7	SW846 8260B
Carbon tetrachloride	ND	10.0	10.8	ug/L	108		SW846 8260B
	ND	10.0	10.2	ug/L	102	5.7	SW846 8260B
Chlorobenzene	ND	10.0	9.38	ug/L	94		SW846 8260B
	ND	10.0	9.16	ug/L	92	2.5	SW846 8260B
Chloroform	ND	10.0	10.3	ug/L	103		SW846 8260B
	ND	10.0	10.6	ug/L	106	2.6	SW846 8260B
1,1-Dichloroethane	1.7	10.0	12.4	ug/L	106		SW846 8260B
	1.7	10.0	12.2	ug/L	105	1.3	SW846 8260B
trans-1,2-Dichloroethene	0.43	10.0	10.1	ug/L	97		SW846 8260B
	0.43	10.0	9.67	ug/L	92	4.8	SW846 8260B
1,1-Dichloroethene	0.44	10.0	10.9	ug/L	104		SW846 8260B
	0.44	10.0	10.1	ug/L	97	7.0	SW846 8260B
1,2-Dichloropropane	ND	10.0	10.4	ug/L	104		SW846 8260B
	ND	10.0	10.4	ug/L	104	0.24	SW846 8260B
Ethylbenzene	ND	10.0	10.6	ug/L	106		SW846 8260B
	ND	10.0	9.51	ug/L	95	10	SW846 8260B
Methylene chloride	ND	10.0	8.69	ug/L	87		SW846 8260B
	ND	10.0	8.98	ug/L	90	3.3	SW846 8260B
Tetrachloroethene	24	10.0	32.7	ug/L	82		SW846 8260B
	24	10.0	30.8	ug/L	63 a	5.9	SW846 8260B
Toluene	1.3	10.0	10.5	ug/L	93		SW846 8260B
	1.3	10.0	10.4	ug/L	91	1.1	SW846 8260B
1,1,1-Trichloroethane	ND	10.0	10.9	ug/L	109		SW846 8260B
	ND	10.0	10.7	ug/L	107	1.8	SW846 8260B
Trichloroethene	2.9	10.0	12.9	ug/L	100		SW846 8260B
	2.9	10.0	12.6	ug/L	97	2.4	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	92	(79 - 119)
	97	(79 - 119)
1,2-Dichloroethane-d4	110	(65 - 126)
	115	(65 - 126)

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METHOD BLANK REPORT

GC Volatiles

Client Lot #...: D8B060251 **Work Order #...:** KGXVM1AA **Matrix.....:** WATER
MB Lot-Sample #: I8B120000-083

Prep Date.....: 02/11/08 **Analysis Time..:** 09:27
Analysis Date..: 02/11/08 **Prep Batch #...:** 8043083
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Methane	ND	0.50	ug/L	RSK SOP-175

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: D8B060251 **Work Order #...:** KGXVM1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: I8B120000-083 KGXVM1AD-LCSD
Prep Date.....: 02/11/08 **Analysis Date..:** 02/11/08
Prep Batch #...: 8043083 **Analysis Time..:** 09:44
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Methane	**46.7**	**50.7**	**ug/L**	**109**		**RSK SOP-175**
	46.1	**49.4**	**ug/L**	**107**	**2.6**	**RSK SOP-175**
Ethane	**88.5**	**96.1**	**ug/L**	**109**		**RSK SOP-175**
	87.3	**93.7**	**ug/L**	**107**	**2.5**	**RSK SOP-175**
Ethene	**81.7**	**88.0**	**ug/L**	**108**		**RSK SOP-175**
	80.6	**85.6**	**ug/L**	**106**	**2.7**	**RSK SOP-175**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

GC Volatiles

Client Lot #...: D8B060251 **Work Order #...:** KGRLM1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: I8B080135-002 KGRLM1AD-MSD
Date Sampled...: 02/04/08 13:50 **Date Received..:** 02/08/08
Prep Date.....: 02/11/08 **Analysis Date..:** 02/11/08
Prep Batch #...: 8043083 **Analysis Time..:** 12:11
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Methane	**17**	**44.7**	**60.0**	**ug/L**	**97**		**RSK SOP-175**
	17	**45.9**	**64.6**	**ug/L**	**105**	**7.4**	**RSK SOP-175**
Ethane	**0.062**	**84.6**	**82.7**	**ug/L**	**98**		**RSK SOP-175**
	0.062	**87.0**	**90.2**	**ug/L**	**104**	**8.7**	**RSK SOP-175**
Ethene	**0.54**	**78.1**	**75.7**	**ug/L**	**96**		**RSK SOP-175**
	0.54	**80.3**	**84.3**	**ug/L**	**104**	**11**	**RSK SOP-175**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8B060251 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: D8B120000-200 **Prep Batch #...:** 8043200					
Potassium	92	(89 - 114)	SW846 6010B	02/13/08	KGX621CF
		Dilution Factor: 1	Analysis Time..: 13:47		
Magnesium	92	(90 - 113)	SW846 6010B	02/13/08	KGX621CG
		Dilution Factor: 1	Analysis Time..: 13:47		
Calcium	94	(90 - 111)	SW846 6010B	02/13/08	KGX621CH
		Dilution Factor: 1	Analysis Time..: 13:47		
Sodium	91	(90 - 115)	SW846 6010B	02/13/08	KGX621CJ
		Dilution Factor: 1	Analysis Time..: 13:47		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8B060251 **Matrix.....:** WATER
Date Sampled...: 02/05/08 10:48 **Date Received..:** 02/06/08

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8B060234-001 **Prep Batch #...:** 8043200							
Potassium	90	(76 - 132)			SW846 6010B	02/13/08	KGMHD1A0
	94	(76 - 132)	3.2	(0-25)	SW846 6010B	02/13/08	KGMHD1A1
		Dilution Factor: 1					
		Analysis Time..: 16:51					
Magnesium	95	(62 - 146)			SW846 6010B	02/13/08	KGMHD1A2
	99	(62 - 146)	3.9	(0-25)	SW846 6010B	02/13/08	KGMHD1A3
		Dilution Factor: 1					
		Analysis Time..: 16:51					
Calcium	97	(48 - 153)			SW846 6010B	02/13/08	KGMHD1A4
	101	(48 - 153)	3.8	(0-25)	SW846 6010B	02/13/08	KGMHD1A5
		Dilution Factor: 1					
		Analysis Time..: 16:51					
Sodium	82	(70 - 203)			SW846 6010B	02/13/08	KGMHD1A6
	85	(70 - 203)	2.6	(0-40)	SW846 6010B	02/13/08	KGMHD1A7
		Dilution Factor: 1					
		Analysis Time..: 16:51					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: D8B060251 **Matrix.....:** WATER
Date Sampled...: 02/05/08 08:42 **Date Received..:** 02/06/08

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: D8B060255-001 **Prep Batch #...:** 8043200							
Potassium	96	(76 - 132)			SW846 6010B	02/13/08	KGMPV1C3
	98	(76 - 132)	2.5	(0-25)	SW846 6010B	02/13/08	KGMPV1C4
		Dilution Factor: 1					
		Analysis Time..: 14:03					
Magnesium	94	(62 - 146)			SW846 6010B	02/13/08	KGMPV1C6
	97	(62 - 146)	2.8	(0-25)	SW846 6010B	02/13/08	KGMPV1C7
		Dilution Factor: 1					
		Analysis Time..: 14:03					
Calcium	96	(48 - 153)			SW846 6010B	02/13/08	KGMPV1C9
	99	(48 - 153)	2.7	(0-25)	SW846 6010B	02/13/08	KGMPV1DA
		Dilution Factor: 1					
		Analysis Time..: 14:03					
Sodium	94	(70 - 203)			SW846 6010B	02/13/08	KGMPV1DD
	97	(70 - 203)	2.8	(0-40)	SW846 6010B	02/13/08	KGMPV1DE
		Dilution Factor: 1					
		Analysis Time..: 14:03					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: D8B060251 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Ammonia as N		Work Order #: KGX0A1AA		MB Lot-Sample #:	D8B120000-137	
	ND	0.040	mg/L	MCAWW 350.1	02/11/08	8043137
		Dilution Factor: 1				
		Analysis Time..: 10:00				
Bicarbonate, as CaCO3		Work Order #: KGWEN1AA		MB Lot-Sample #:	D8B090000-132	
	ND	5.0	mg/L	MCAWW 310.1	02/07/08	8040132
		Dilution Factor: 1				
		Analysis Time..: 18:00				
Carbonate, as CaCO3		Work Order #: KGWEQ1AA		MB Lot-Sample #:	D8B090000-134	
	ND	5.0	mg/L	MCAWW 310.1	02/07/08	8040134
		Dilution Factor: 1				
		Analysis Time..: 18:00				
Chloride		Work Order #: KGREK1AA		MB Lot-Sample #:	D8B080000-085	
	ND	0.30	mg/L	MCAWW 300.0A	02/07/08	8039085
		Dilution Factor: 1				
		Analysis Time..: 14:07				
Free carbon dioxide		Work Order #: KHA311AA		MB Lot-Sample #:	D8B190000-421	
	ND	5.0	mg/L	SM18 4500-CO2 C	02/07/08	8050421
		Dilution Factor: 1				
		Analysis Time..: 18:00				
Sulfate		Work Order #: KGRE11AA		MB Lot-Sample #:	D8B080000-086	
	ND	5.0	mg/L	MCAWW 300.0A	02/07/08	8039086
		Dilution Factor: 1				
		Analysis Time..: 14:07				
Total Alkalinity		Work Order #: KGWEL1AA		MB Lot-Sample #:	D8B090000-130	
	1.5 B	**5.0**	**mg/L**	**MCAWW 310.1**	**02/07/08**	**8040130**
		Dilution Factor: 1				
		Analysis Time..: 18:00				
Total Dissolved Solids		Work Order #: KGX451AA		MB Lot-Sample #:	D8B070000-396	
	ND	10	mg/L	MCAWW 160.1	02/07/08	8038396
		Dilution Factor: 1				
		Analysis Time..: 17:00				
Total Organic Carbon		Work Order #: KGXHL1AA		MB Lot-Sample #:	D8B110000-107	
	0.57 B	**1.0**	**mg/L**	**MCAWW 415.1**	**02/07/08**	**8042107**
		Dilution Factor: 1				
		Analysis Time..: 17:00				

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Lot-Sample #...: D8B060251 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Ammonia as N		WO#:KGX0A1AC-LCS/KGX0A1AD-LCSD LCS Lot-Sample#: D8B120000-137					
	102	(90 - 110)			MCAWW 350.1	02/11/08	8043137
	103	(90 - 110)	0.80	(0-10)	MCAWW 350.1	02/11/08	8043137
		Dilution Factor: 1			Analysis Time..: 10:00		
Chloride		WO#:KGREK1AC-LCS/KGREK1AD-LCSD LCS Lot-Sample#: D8B080000-085					
	101	(90 - 110)			MCAWW 300.0A	02/07/08	8039085
	99	(90 - 110)	2.4	(0-10)	MCAWW 300.0A	02/07/08	8039085
		Dilution Factor: 1			Analysis Time..: 13:32		
Sulfate		WO#:KGRE11AC-LCS/KGRE11AD-LCSD LCS Lot-Sample#: D8B080000-086					
	100	(90 - 110)			MCAWW 300.0A	02/07/08	8039086
	98	(90 - 110)	1.8	(0-10)	MCAWW 300.0A	02/07/08	8039086
		Dilution Factor: 1			Analysis Time..: 13:32		
Total Alkalinity		WO#:KGWEL1AC-LCS/KGWEL1AD-LCSD LCS Lot-Sample#: D8B090000-130					
	98	(90 - 110)			MCAWW 310.1	02/07/08	8040130
	98	(90 - 110)	0.50	(0-10)	MCAWW 310.1	02/07/08	8040130
		Dilution Factor: 1			Analysis Time..: 18:00		
Total Dissolved Solids		WO#:KGX451AC-LCS/KGX451AD-LCSD LCS Lot-Sample#: D8B070000-396					
	93	(86 - 106)			MCAWW 160.1	02/07/08	8038396
	96	(86 - 106)	2.7	(0-20)	MCAWW 160.1	02/07/08	8038396
		Dilution Factor: 1			Analysis Time..: 17:00		
Total Organic Carbon		WO#:KGXHL1AC-LCS/KGXHL1AD-LCSD LCS Lot-Sample#: D8B110000-107					
	101	(86 - 114)			MCAWW 415.1	02/07/08	8042107
	100	(86 - 114)	1.5	(0-12)	MCAWW 415.1	02/07/08	8042107
		Dilution Factor: 1			Analysis Time..: 16:00		

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: D8B060251 **Matrix.....:** WATER
Date Sampled...: 02/06/08 10:39 **Date Received..:** 02/07/08

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Ammonia as N		WO#: KGKT81AE-MS/KGKT81AF-MSD				MS Lot-Sample #: D8B050252-002	
	77 N	(90 - 110)			MCAWW 350.1	02/11/08	8043137
	75 N	(90 - 110)	1.6	(0-10)	MCAWW 350.1	02/11/08	8043137
		Dilution Factor: 1					
		Analysis Time..: 10:00					
Ammonia as N		WO#: KGPXF1A7-MS/KGPXF1A8-MSD				MS Lot-Sample #: D8B070249-008	
	85 N	(90 - 110)			MCAWW 350.1	02/11/08	8043137
	84 N	(90 - 110)	0.49	(0-10)	MCAWW 350.1	02/11/08	8043137
		Dilution Factor: 1					
		Analysis Time..: 10:00					
Chloride		WO#: KF9GR1CD-MS/KF9GR1CE-MSD				MS Lot-Sample #: D8A290265-002	
	102	(80 - 120)			MCAWW 300.0A	02/07/08	8039085
	103	(80 - 120)	1.1	(0-20)	MCAWW 300.0A	02/07/08	8039085
		Dilution Factor: 1					
		Analysis Time..: 15:16					
Sulfate		WO#: KF9GR1CF-MS/KF9GR1CG-MSD				MS Lot-Sample #: D8A290265-002	
	102	(80 - 120)			MCAWW 300.0A	02/07/08	8039086
	102	(80 - 120)	0.56	(0-20)	MCAWW 300.0A	02/07/08	8039086
		Dilution Factor: 1					
		Analysis Time..: 15:16					
Total Organic Carbon		WO#: KGMH51A1-MS/KGMH51A2-MSD				MS Lot-Sample #: D8B060234-002	
	98	(65 - 139)			MCAWW 415.1	02/07/08	8042107
	98	(65 - 139)	0.07	(0-41)	MCAWW 415.1	02/07/08	8042107
		Dilution Factor: 1					
		Analysis Time..: 18:00					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: D8B060251 **Work Order #...:** KGKWV-SMP KGKWV-DUP **Matrix.....:** WATER

Date Sampled...: 02/04/08 11:45 **Date Received..:** 02/05/08

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #: D8B050263-005		
	400	390	mg/L	3.3	(0-20)	MCAWW 160.1	02/07/08	8038397

Dilution Factor: 1 Analysis Time..: 17:00

Chain of Custody Record

1.9°C # IR1 2/6/08

SEVERN TRENT **STL**

Severn Trent Laboratories, Inc.

47

4124 (0607)

Client	Project Manager	Date	Chain of Custody Number
Waste Management	Mark Snyder		403801
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 2
2859 Paces Ferry Rd. Ste. 1600	(770)-805-3529		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
Atlanta / GA / 30339	Mark Snyder	Betsy Sa	
Project Name and Location (State)	**Carrier/Waybill Number**		
Piedmont	FED-EX		
Contract/Purchase Order/Quote No.			
134 267445			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Unpres.	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Ca, Mg, Na, K	Chloride	T. Alk	Bicarb Alk	Carb Alk	SIM	TOC	TDS	Ammonia	Diss. Methane	VOA	Special Instructions/ Conditions of Receipt
3406-T01	1/5/08	12:40		X			X	X	X	X	X			1	1	X	X	X	X	1	X	X	3	3	
				X (cm)																				
3406-Trip Blank	1/18/08	—		X						X													X	

Possible Hazard Identification

☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☑ Archive For 1 Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☑ Other Standard

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Daniel Stidner	2/5/2008	17:00	1. Received By:	2/6/08	0930
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: FED-EX PRIORITY O.N.

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Test America